

**Commonwealth of Kentucky**  
**Natural Resources and Environmental Protection Cabinet**  
**Department for Environmental Protection**  
**Division for Air Quality**  
**803 Schenkel Lane**  
**Frankfort, Kentucky 40601**  
**(502) 573-3382**

**AIR QUALITY PERMIT**

**Permittee Name:** Kentucky Pioneer Energy LLC  
**Mailing Address:** 312 Walnut Street, Suite 2000, Cincinnati, Ohio 45202

**Source Name:** Kentucky Pioneer Energy LLC  
**Mailing Address:** 312 Walnut Street, Suite 2000, Cincinnati, Ohio 45202

**Source Location:** 12145 Irvine Road, Trapp, Kentucky 40391

**Permit Type:** Federally-Enforceable  
**Review Type:** PSD, Title V

**Permit Number:** V-00-049  
**Log Number:** 51152  
**Application Complete Date:** January 21, 2000

**KYEIS ID #:** 21-049-00053  
**SIC Code:** 4911  
**ORIS Code:** 55266

**Region:** Bluegrass  
**County:** Clark

**Issuance Date:** **June 7, 2001**  
**Expiration Date:** **June 7, 2006**

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**John E. Hornback, Director**  
**Division for Air Quality**

## TABLE OF CONTENTS

<u>SECTION</u>		<u>DATE OF ISSUANCE</u>	<u>PAGE</u>
SECTION A	PERMIT AUTHORIZATION	June 7, 2001	1
SECTION B	EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS	June 7, 2001	2
SECTION C	INSIGNIFICANT ACTIVITIES	June 7, 2001	32
SECTION D	SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS	June 7, 2001	33
SECTION E	SOURCE CONTROL EQUIPMENT OPERATING REQUIREMENTS	June 7, 2001	34
SECTION F	MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS	June 7, 2001	35
SECTION G	GENERAL CONDITIONS	June 7, 2001	38
SECTION H	ALTERNATE OPERATING SCENARIOS	June 7, 2001	44
SECTION I	COMPLIANCE SCHEDULE	June 7, 2001	44
SECTION J	ACID RAIN PERMIT	June 7, 2001	45

## **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application which was determined to be complete on January 21, 2000, the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This draft permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any emission units without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in the Regulation 401 KAR 50:035, Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

References in this permit to regulatory requirements of 401 KAR 50:035 are based on the governing regulation which was in effect at the time the permit application was deemed complete. For future reference to the regulatory basis for permit conditions and for the purposes of implementation and compliance, the corresponding portions of the provisions of new permitting regulations in 401 KAR Chapter 52 (effective January 15, 2001) shall apply

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**

**Emissions Units: 01, 02 (GT1, GT2) - Synthesis/Natural Gas-Fired Combined Cycle Combustion Turbines**

### **Description:**

1765 MMBTU/hr maximum heat input capacity, each, 197 MW power capacity output (turbine only, does not include heat recovery steam generator).

GE 7FA synthesis (primary) or natural (secondary/backup) gas-fired combined cycle combustion turbine equipped with steam injection.

Construction commenced: estimated - Summer 2001

### **Applicable Regulations:**

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality.

Regulation 401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, for emissions unit with a heat input at peak load equal to or greater than 10 MMBTU/hour for which construction commenced after October 3, 1977.

Regulation 401 KAR 59:021, New municipal solid waste incinerators.

Regulation 40 CFR 60 Subpart Eb, Standards of Performance for Large Municipal Waste Combustors for which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996.

### **1. Operating Limitations:**

a) Synthesis gas (mainly consists of carbon monoxide and hydrogen gas) with natural gas back-up fuel, shall be the sole fuels fired in the turbines. [Self-imposed restriction pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality].

b) The heat input shall not exceed 1765 MMBTU/hour at ISO standard day conditions, in accordance with Regulation 401 KAR 51:017. The rated heat input capacity shall be calculated from the fuel usage, and corresponding fuel heating value characteristic of the fuel to be combusted corrected to ISO standard conditions based on manufacturer's curves or equations for correction.

c) Natural gas usage in the combustion turbine shall not exceed 7,533,600 MMBTU in the first 12 months after startup, 3,766,800 MMBTU in the second twelve months, and 1,833, 400 MMBTU/yr in any subsequent rolling 12 month period. [This condition may be modified upon a complete analysis indicating compliance with Best Available Control Technology and Air Quality Impact Analyses as required by Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, and any other applicable requirements.]

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- d) Pursuant to Regulation 40 CFR 60.53b, maximum synthesis gas fuel flow to the gas turbines in MMBTU/hr shall not exceed 110% of the synthesis gas fuel flow during the most recent performance test.
- e) Pursuant to Regulation 40 CFR 60.54b(a), no later than the date 6 months after the date of startup, each facility supervisor and shift supervisor shall obtain and maintain a current provisional certification from either the American Society of Mechanical Engineers or a State certification program.
- f) Pursuant to Regulation 40 CFR 60.54b(b), no later than the date 6 months after the date of startup, each facility supervisor and shift supervisor shall have completed full certification or shall have scheduled a full certification exam with either the American Society of Mechanical Engineers or a State Certification program.
- g) Pursuant to Regulation 40 CFR 60.54b(c), 6 months after the date of startup, no owner or operator shall allow the facility to be operated at any time unless one of the following persons is on duty and at the facility: A fully certified chief facility operator, a provisionally certified chief facility operator who is scheduled to take the full certification exam according to the schedule specified in paragraph (b) of section 60.54 of 40 CFR 60 Subpart Eb, or a fully certified shift supervisor who is scheduled to take the full certification exam according to the schedule specified in paragraph (b) of section 60.54 of 40 CFR 60 Subpart Eb.
- h) Pursuant to Regulation 40 CFR 60.54b(e), a site-specific operating manual shall be developed prior to commencement of normal operations, and updated annually. The manual shall include a description of the applicable emission limits, procedures for proper operation of the gasification plant and gas turbines, startup, shutdown, and malfunction procedures. The manual shall include all elements of 40 CFR 60.54b(e)(1) through (11) as they relate to the site specific operation of an IGCC power plant. A training program shall be developed to review the operating manual within 6 months of startup and annually. The training program shall include each person who has responsibilities affecting the operation of the facility, including, but not limited to, chief facility operators, shift supervisors, control room operators, and appropriate maintenance personnel. The manual must be readily accessible and available for inspection.
- i) Pursuant to 40 CFR 60.57b(b), a siting analysis shall be conducted. This analysis shall be made available to the public, and comments accepted at the public meeting.
- j) Except for periods of startup, shutdown, and malfunction, 90% full load capacity (or greater) must be maintained by each turbine unless additional ambient impact modeling is performed demonstrating that other load scenarios result in less impact.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****2. Emission Limitations:**

a) Pursuant to Regulations 40 CFR 60.332, and 401 KAR 51:017, nitrogen oxides emission level in the exhaust gas shall not exceed 0.0735 lb/MMBTU based on 15 ppm by volume at 15 % oxygen, on a dry basis, during any rolling three-hour average period when firing synthesis gas. The nitrogen oxides emission level in the exhaust gas shall not exceed 0.102 lb/MMBTU based on 25 ppm by volume at 15 % oxygen, on a dry basis, during any rolling three-hour average period when firing natural gas. When both fuels are fired simultaneously, the allowable emissions shall be no higher than the above limit specified for natural gas firing operations. Additionally, the permittee shall keep records of the quantity of each fuel used and the actual NO<sub>x</sub>/CO emissions during such periods. The total emission from these operations, together with the emissions from normal operations, shall not exceed the emission rates used in the permittee's air quality analysis modeling. The ppm level of nitrogen oxides (at ISO standard conditions) and lb/MMBTU shall be demonstrated by stack test, and measured with use of a continuous emission monitor (CEM).

b) Pursuant to Regulation 401 KAR 51:017, the carbon monoxide emission level in the exhaust gas shall not exceed 0.032 lb/MMBTU based on 15 ppm by volume at 15 % oxygen, on a dry basis, during any rolling three-hour average period when firing synthesis gas. The carbon monoxide emission level in the exhaust gas shall not exceed 0.055 lb/MMBTU based on 25 ppm by volume at 15 % oxygen, on a dry basis, during any rolling three-hour average period when firing natural gas. When both fuels are fired simultaneously, the allowable emissions shall be no higher than the above limit specified for natural gas firing operations. Additionally, the permittee shall keep records of the quantity of each fuel used and the actual NO<sub>x</sub>/CO emissions during such periods. The total emission from these operations, together with the emissions from normal operations, shall not exceed the emission rates used in the permittee's air quality analysis modeling. The ppm level of carbon monoxide and lb/MMBTU shall be demonstrated by stack test, and measured with use of a continuous emission monitor (CEM).

c) Pursuant to Regulation 40 CFR 60.333, and 401 KAR 51:017, the sulfur dioxide emission level in the exhaust gas shall not exceed 0.032 lb/MMBTU based on any rolling three-hour average period. Sulfur dioxide emissions also shall not exceed 30 ppm by volume or 20% of the potential sulfur dioxide emission concentration (80% reduction by weight or volume) corrected to 7% oxygen (dry basis), whichever is most stringent. The level of sulfur dioxide converted to lb/MMBTU shall be demonstrated by stack test, and measured with use of a continuous emission monitor (CEM).

d) Pursuant to Regulation 401 KAR 51:017, particulate emissions shall not exceed 0.011 lb/MMBTU. The lb/MMBTU level of particulate emissions shall be demonstrated by stack test, then calculated based on the emission factor derived during the test, fuel consumption data, fuel heat input, and fuel heat content [see specific monitoring requirements].

e) Pursuant to Regulation 401 KAR 51:017, volatile organic compound emissions shall not exceed 0.0044 lb/MMBTU. The lb/MMBTU level of volatile organic compound emissions shall be demonstrated by stack test, then calculated based on the emission factor derived during the test, fuel consumption data, fuel heat input, and fuel heat content [see specific monitoring requirements].

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- f) Pursuant to Regulation 401 KAR 51:017, beryllium emissions shall not exceed 6.0E-07 lb/MMBTU. The lb/MMBTU level of beryllium emissions shall be demonstrated by stack test, then calculated based on the emission factor derived during the test, fuel consumption data, fuel heat input, and fuel heat content.
- g) Pursuant to Regulation 40 CFR 60.52b, emissions of cadmium shall not exceed 0.020 milligrams per dry standard cubic meter, corrected to 7% oxygen.
- h) Pursuant to Regulation 40 CFR 60.52b, emissions of lead shall not exceed 0.20 milligrams per dry standard cubic meter, corrected to 7% oxygen.
- i) Pursuant to Regulation 40 CFR 60.52b, emissions of mercury shall not exceed 0.080 milligrams per dry standard cubic meter, corrected to 7% oxygen.
- j) Pursuant to Regulation 40 CFR 60.52b, and to preclude applicability of 401 KAR 51:017, emissions of dioxins and furans shall not exceed 0.01 nanograms per dry standard cubic meter (total mass), corrected to 7% oxygen.
- k) Pursuant to Regulation 40 CFR 60.52b, emissions of hydrogen chloride shall not exceed 25 ppm by volume or 5% of the potential hydrogen chloride emission concentration (95% reduction by weight or volume), corrected to 7% oxygen (dry basis), whichever is less stringent.
- l) Pursuant to 40 CFR 60.58b, the above emission limits shall apply at all times when syngas is fired, except during periods of startup, shutdown, or malfunction. Duration of startup, shutdown and malfunction periods are limited to 2 hours per occurrence

**3. Testing Requirements:**

- a) Pursuant to Regulation 40 CFR 60.335 (b), in conducting performance tests required by 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of Part 60 or other methods or procedures as specified in 40 CFR 60.335, except as provided for in 40 CFR 60.8(b).
- b) Pursuant to Regulation 401 KAR 50:045, the owner or operator shall conduct an initial performance test for nitrogen oxides. The initial nitrogen oxides performance test shall be performed in accordance with General Condition G(d)(5).
- c) Pursuant to Regulation 401 KAR 50:045, the owner or operator shall conduct an initial test for sulfur dioxide in accordance with General Condition G(d)(5).

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- d) Pursuant to Regulation 401 KAR 50:045, the owner or operator shall conduct an initial performance test for carbon monoxide, using a reference test method approved by the Division, in accordance with General Condition G(d)(5).
- e) Pursuant to Regulation 401 KAR 50:045 and 40 CFR 60.58b, the owner or operator shall conduct an initial and annual performance tests for particulate matter, using a reference test method approved by the Division, in accordance with General Condition G(d)(5).
- f) Pursuant to Regulation 401 KAR 50:045, the owner or operator shall conduct an initial performance test for volatile organic compounds, using a reference test method approved by the Division, in accordance with General Condition G(d)(5).
- g) Pursuant to Regulation 401 KAR 50:045, the owner or operator shall conduct an initial performance test for beryllium, using a reference test method approved by the Division, in accordance with General Condition G(d)(5).
- h) See General Condition G(d)(6).
- i) Pursuant to Regulation 40 CFR 60.52b, the owner or operator shall conduct an initial and annual performance tests for cadmium, lead and mercury, using EPA Reference Method 29 or an alternate reference test approved by the Division, in accordance with General Condition G(d)(5).
- j) Pursuant to Regulation 40 CFR 60.52b, the owner or operator shall conduct an initial and annual performance tests for hydrogen chloride using EPA Reference Method 26 or 26a or an alternate reference test approved by the Division, in accordance with General Condition G(d)(5).
- k) Pursuant to Regulation 40 CFR 60.52b, the owner or operator shall conduct an initial and annual performance tests for dioxins and furans using EPA Reference Method 23 or an alternate reference test approved by the Division, in accordance with General Condition G(d)(5). If emissions are less than 7 ng/m<sup>3</sup>, then the testing frequency can be decreased as allowed in 40 CFR 60.58 (g)(5)(iii) upon Division approval.

**4. Specific Monitoring Requirements:**

- a) Pursuant to Regulation 401 KAR 50:035, Section 7(1)(c), 40 CFR 60.58b, and 40 CFR 75, the permittee shall install, calibrate, maintain, and operate the nitrogen oxides Continuous Emissions Monitor (CEM). The nitrogen oxides CEM shall be used as the indicator of continuous compliance with the nitrogen oxides emission standard. Excluding the startup and shut down periods, if any 3-hour rolling average exceeds the nitrogen oxides emission limitation, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and complete necessary control device/process/CEM repairs or take corrective action as soon as practicable.



**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- b) The nitrogen oxides CEM shall be used in lieu of the water to fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1). The calibration of the water to fuel monitoring device required in 40 CFR 60.335(c)(2) will be replaced by the 40 CFR 75 certification tests of the nitrogen oxides CEM. The CEM emission rates for nitrogen oxides shall be corrected to ISO conditions to demonstrate compliance with the nitrogen oxides standard established in Subsection 2.
- c) Additionally, a CEM system shall be installed, calibrated, maintained, and operated for measuring oxygen levels in the exhaust gas stacks.
- d) The permittee shall comply with all of the monitoring requirements of 40 CFR 75.
- e) Pursuant to Regulation 40 CFR 60.334(a), the owner or operator using water injection to control nitrogen oxide emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption. This system shall be accurate to within plus or minus five (5) percent and shall be approved by the Division.
- f) The nitrogen oxide and sulfur dioxide CEM shall be used in lieu of the fuel nitrogen and sulfur content monitoring required by 40 CFR 60.334(b).
- g) Pursuant to Regulation 401 KAR 50:035, Section 7(1)(c), and 40 CFR 60.58b to meet the periodic monitoring requirement for carbon monoxide the permittee shall use a continuous emission monitor (CEM). Excluding the startup and shut down periods, if any 3-hour rolling average carbon monoxide value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and complete necessary process or CEM repairs or take corrective action as soon as practicable.
- h) Pursuant to Regulation 401 KAR 50:035, Section 7(1)(c), 40 CFR 60.58b, and 40 CFR 75, to meet the periodic monitoring requirement for sulfur dioxide the permittee shall use a continuous emission monitor (CEM). Excluding the startup and shut down periods, if any rolling 3-hour average sulfur dioxide value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and complete necessary process or CEM repairs or take corrective action as soon as practicable.
- i) Pursuant to Regulation 40 CFR 60.58b, to meet the periodic monitoring requirement for opacity the permittee shall use a continuous opacity monitor (COM). Excluding the startup and shut down periods, if any 6 minute average exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and complete necessary process or COM repairs or take corrective action as soon as practicable.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- j) Pursuant to 40 CFR 60.13(b), the continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting the initial performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device(s).
- k) Pursuant to 40 CFR 60.13(c), the owner or operator of an emissions unit shall conduct a performance evaluation of the continuous monitoring system during any performance test or within 30 days thereafter, in accordance with the applicable performance specification in 40 CFR 60 Appendix B, for nitrogen oxides, sulfur dioxide, or carbon monoxide. Performance evaluations of CEM systems shall be conducted at other times as required.
- l) Pursuant to 40 CFR 60.13(d)(1), the owner(s) and operator(s) of all continuous monitoring systems shall perform appropriate calibration checks and zero and span adjustments in accordance with a written procedure at least once daily, in accordance with requirements specified in 40 CFR 60.13(d)(1).
- m) Pursuant to 40 CFR 60.13(e), except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements which involves one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen (15) minute period.
- n) Pursuant to 40 CFR 60.13(f), all continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the emissions unit are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of 40 CFR 60 Appendix B shall be used.
- o) Pursuant to 40 CFR 60.13(h), for the continuous monitoring systems the owner(s) or operator(s) shall reduce all data to one-hour averages. The one-hour averages shall be computed from four or more data points equally spaced over each one-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent oxygen). All excess emissions shall be converted into units of the applicable standard using the applicable conversion procedures specified in Subpart GG. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used to specify the applicable emission standard.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

p) Pursuant to Regulation 401 KAR 50:035, Section 7(1)(c), for the particulate/particulate-10 periodic monitoring the permittee shall develop the accurate emission factor during the performance test. The permittee shall record the synthesis gas heating value and the fuel consumption. On a daily basis, the permittee shall calculate the emission rate for particulate/particulate-10 using the fuel consumption, heating value of synthesis gas, and emission factor developed during the most recent performance test. Excluding the startup and shut down periods, if any 24-hour rolling average particulate/particulate-10 value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and complete necessary process repairs or take corrective action as soon as practicable.

q) Pursuant to Regulation 401 KAR 50:035, Section 7(1)(c), for the beryllium periodic monitoring the permittee shall develop the accurate emission factor during the performance test. The permittee shall record the synthesis gas heating value and the fuel consumption. On a daily basis, the permittee shall calculate the emission rate for beryllium using the fuel consumption, heating value of synthesis gas, and emission factor developed during the most recent performance test. Excluding the startup and shut down periods, if any 24-hour rolling average beryllium value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and complete necessary process repairs or take corrective action as soon as practicable.

r) Pursuant to Regulation 401 KAR 50:035, Section 7(1)(c), for the volatile organic compounds periodic monitoring the permittee shall develop the accurate emission factor during the performance test. The permittee shall record the synthesis gas heating value and the fuel consumption. On a daily basis, the permittee shall calculate the emission rate for volatile organic compounds using the fuel consumption, heating value of synthesis gas, and emission factor developed during the most recent performance test. Excluding the startup and shut down periods, if any 24-hour rolling average volatile organic compounds value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and complete necessary process repairs or take corrective action as soon as practicable.

s) The permittee shall monitor the hours of operation of the emission unit on a weekly basis.

**5. Specific Record Keeping Requirements:**

a) Pursuant to Regulation 401 KAR 59:005, Section 3, the owner or operator of the gas turbine shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by Regulation 401 KAR 59:005 recorded in a permanent form suitable for inspection.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- b) Records, including those documenting the results of each compliance test and all other records and reports required by this permit, shall be maintained for five (5) years pursuant to Regulation 401 KAR 50:035.
- c) Pursuant to Regulation 401 KAR 59:005, Section 3, the owner or operator of the unit shall maintain the records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the emissions unit, any malfunction of the air pollution control equipment; or any period during which a continuous monitoring system or monitoring device is inoperative. The record shall also include the type and quantity of fuel fired and the estimated emissions during each episode.
- d) Pursuant to Regulation 401 KAR 50:035, Section 7, records of the hourly synthesis gas and/or natural gas (million standard cubic feet) combusted shall be maintained. Records shall be maintained to show that synthesis gas and natural gas are the sole fuels burned in the turbine.
- e) Pursuant to Regulation 401 KAR 50:035, Section 7, the permittee shall maintain a weekly log of all hours of operation of the turbine, for any consecutive twelve (12) month period.
- f) Pursuant to Regulation 401 KAR 50:035, Section 7, the permittee shall maintain a weekly log of all particulate/particulate-10, volatile organic compounds, and beryllium calculations, emissions, and test results.
- g) The owner/operator shall comply with the recordkeeping requirements of 40 CFR 60 Subpart Eb, section 60.59b.

**6. Specific Reporting Requirements:**

- a) Pursuant to Regulation 401 KAR 59:005, Section 3, minimum data requirements which follow shall be maintained and furnished in the format specified by the Division. Owners or operators of facilities required to install continuous monitoring systems shall submit for every calendar quarter a written report of excess emissions (as defined in applicable sections) to the Division. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter and shall include the following information:
  - 1) The magnitude of the excess emissions computed in accordance with the Regulation 401 KAR 59:005, Section 4(8), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
  - 2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the emissions unit. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

3) The date and time identifying each period during which continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

b) Pursuant to Regulation 40 CFR 60.334 (c), for the reports regarding nitrogen oxides excess emissions, in lieu of those based on the water to fuel ratio monitoring, periods of excess emissions are defined as follows:

Nitrogen oxides: any three-hour period during which the average nitrogen oxides emission level as measured by the continuous monitoring system, falls above the emission limitation specified in Subsection 2.

c) Pursuant to Regulation 40 CFR 60.334(c), each report of nitrogen oxides excess emissions shall include the average nitrogen oxides emission level in lieu of water to fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and the graphs or figures developed.

d) Pursuant to 401 KAR 50:035 Section 7(1)(c), monitoring requirement with CEM for nitrogen oxides, excess emissions are defined as any three (3) hour period during which the average emissions (arithmetic average) exceed the applicable nitrogen oxides emission standard. These periods of excess emissions shall be reported quarterly.

e) Pursuant to Regulation 40 CFR 60.334(c), excess emissions of sulfur dioxide are defined as any daily period during which the sulfur dioxide emissions as indicated by continuous emission monitoring, or the sulfur content (or as otherwise required in an approved custom fuel sulfur monitoring plan) of the fuel being fired in the gas turbine(s) exceeds the limitations set forth in Subsection 2, Emission Limitations. These periods of excess emissions shall be reported quarterly.

f) Pursuant to 401 KAR 50:035, Section 7(1)(c), monitoring requirement with CEM for carbon monoxide, excess emissions are defined as any three (3) hour period during which the average emissions (arithmetic average of three contiguous one hour periods) exceed the applicable carbon monoxide emission standard. These periods of excess emissions shall be reported quarterly.

g) Pursuant to 401 KAR 50:035, Section 7(1)(c), monitoring requirement with record keeping and calculations with test data and the recorded data for particulate/particulate-10, excess emissions are defined as any 24-hour period during which the average emissions exceed the applicable particulate/particulate-10 emission standard. These periods of excess emissions shall be reported quarterly.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- h) Pursuant to 401 KAR 50:035, Section 7(1)(c), monitoring requirement with record keeping and calculations with test data and the recorded data for volatile organic compounds, excess emissions are defined as any 24-hour period during which the average emissions exceed the applicable volatile organic compounds emission standard. These periods of excess emissions shall be reported quarterly.
- i) Pursuant to 401 KAR 50:035, Section 7(1)(c), monitoring requirement with record keeping and calculations with test data and the recorded data for beryllium, excess emissions are defined as any 24-hour period during which the average emissions exceed the applicable beryllium emission standard. These periods of excess emissions shall be reported quarterly.
- j) Pursuant to 401 KAR 50:035, Section 7(1)(c), monitoring requirement with record keeping and calculations with test data and the recorded data for cadmium, excess emissions are defined as any 24-hour period during which the average emissions exceed the applicable cadmium emission standard. These periods of excess emissions shall be reported quarterly.
- k) Pursuant to 401 KAR 50:035, Section 7(1)(c), monitoring requirement with record keeping and calculations with test data and the recorded data for lead, excess emissions are defined as any 24-hour period during which the average emissions exceed the applicable lead emission standard. These periods of excess emissions shall be reported quarterly.
- l) Pursuant to 401 KAR 50:035, Section 7(1)(c), monitoring requirement with record keeping and calculations with test data and the recorded data for mercury, excess emissions are defined as any 24-hour period during which the average emissions exceed the applicable mercury emission standard. These periods of excess emissions shall be reported quarterly.
- m) Pursuant to 401 KAR 50:035, Section 7(1)(c), monitoring requirement with record keeping and calculations with test data and the recorded data for hydrogen chloride, excess emissions are defined as any 24-hour period during which the average emissions exceed the applicable hydrogen chloride emission standard. These periods of excess emissions shall be reported quarterly.
- n) Pursuant to 401 KAR 50:035, Section 7(1)(c), monitoring requirement with record keeping and calculations with test data and the recorded data for dioxins/furans, excess emissions are defined as any 24-hour period during which the average emissions exceed the applicable dioxins/furans emission standard. These periods of excess emissions shall be reported quarterly.
- o) Pursuant to Regulation 40 CFR 60.59b, The owner or operator shall submit semi-annual reports containing a summary of collected data as outlined in 40 CFR 60.59b for all pollutants and parameters regulated under 40 CFR 60.59b.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

p) Pursuant to Regulation 40 CFR 60.59b, the owner or operator shall submit to the Division's Frankfort Regional Office a notification of construction which shall include:

- 1) The intent to construct;
- 2) The planned initial startup date;
- 3) The types of fuels planned for use;
- 4) The unit capacity and supporting calculations, and
- 5) Documents associated with the siting analysis conducted in accordance with 40 CFR 60.57b(b).

A copy of the notification of the public meeting, a transcript of the public meeting, and a summary of responses to public comments shall be accompany the notice of construction.

**7. Specific Control Equipment Operating Conditions:**

a) The diluent injection control measure for nitrogen oxides emissions and, for sulfur removal, the acid gas scrubbing system with the Claus plant and tailgas recycle, shall be operated as necessary to maintain compliance with permitted emission limitations, in accordance with manufacturer's design specifications and/or good engineering practices. The permittee shall implement good combustion control and use clean, low sulfur/low ash synthesis gas as fuel. Natural gas may be fired in the combustion turbine during periods when the gasification system or sulfur removal and recovery system are not operated due to maintenance, malfunction, or emergency situations. Natural gas may be fired at any time, as long as the annual usage does not exceed the operating limits in subsection 1.c.

b) See Section E for further requirements.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 03 (02) - Flare**

#### **Description:**

Construction commenced: expected Summer 2001

Steam-assisted flare, 150 SCF/hr natural gas for pilot flame

#### **Applicable Regulations:**

Regulation 401 KAR 63:015, Flares

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

#### **1. Operating Limitations:**

None.

#### **2. Emission Limitations:**

Pursuant to Regulation 401 KAR 63:015, no person shall cause or allow the emission into the open air of particulate matter from any flare which is greater than twenty (20) percent opacity for more than three (3) minutes in any one (1) day.

#### **3. Testing Requirements:**

None.

#### **4. Specific Monitoring Requirements:**

The permittee shall perform a qualitative visual observation of the opacity of emissions from the flare on a weekly basis and during the occurrence of any syngas flaring and maintain a log of the observations. If visible emissions from the flare are perceived or believed to exceed the applicable standard, the permittee shall determine the opacity of emissions by Reference Method 9 and initiate an inspection of the flare and the entire process making any necessary repairs.

#### **5. Specific Recordkeeping Requirements:**

None.

#### **6. Specific Reporting Requirements:**

None.

#### **7. Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, the permittee shall comply with best available control technology with use of use of low ash/low sulfur natural gas fuel and good flare design.



## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 04 (04) - Briquette Handling Operations**

#### **Description:**

Construction commenced: expected Summer 2001

Rated capacity: 5000 tons/day

#### **Units**

Briquette delivery by rapid dump railcar (12 hours/day)

Conveyor transfer to storage area (12 hours/day)

Conveyor and transfer points (two), (continuous)

Conveyor drop of briquettes into gasifier hopper (continuous)

#### **Applicable Regulations:**

Regulation 401 KAR 63:010, Fugitive emissions, and

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

#### **Applicable Requirements**

a) Pursuant to Regulation 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:

1. Application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;
2. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling.

b) Pursuant to Regulation 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

#### **1. Operating Limitations:**

Pursuant to Regulation 401 KAR 51:017, The "rapid railcar dump and the conveyor transfer to storage area" equipment shall be operated no more than 12 hours/day (weekly average). This limitation is required to ensure the air quality impact is below the significant impact level and a full impact analysis will be required to increase this limit.

#### **2. Emission Limitations:**

None.

#### **3. Testing Requirements:**

None.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**4. Specific Monitoring Requirements:**

- a) The permittee shall monitor/record the hours of operation of the equipment specified in the description.
- b) The permittee shall monitor/record the weight of briquettes handled on a weekly basis.

**5. Specific Recordkeeping Requirements:**

The permittee shall maintain records of weekly briquettes processed, the weight of materials handled, and weekly hours of operation. The record shall be maintained on site and made available for inspection by authorized personnel from the Division.

**6. Specific Reporting Requirements:**

See Section F.

**7. Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, the permittee shall comply with best available control technology with use of enclosures and good operating practices.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 05 (05) - Vitrified Frit Handling Operations**

#### **Description:**

Construction commenced: expected Summer 2001

Rated capacity: 500 tons/day

#### **Units**

Dump from gasifier to conveyor

Transfer to storage pile

Transfer point

Load into railcar (2 hours/day)

#### **Applicable Regulations:**

Regulation 401 KAR 63:010, Fugitive emissions, and

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

Regulation 401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart Eb, Standards of Performance for Large Municipal Waste Combustors for which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996

#### **Applicable Requirements**

a) Pursuant to Regulation 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:

1. Application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;
2. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling.

b) Pursuant to Regulation 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

#### **1. Operating Limitations:**

Pursuant to Regulation 401 KAR 51:017, The "vitrified frit load into railcar" equipment shall be operated no more than 2 hours/day (weekly average). This limitation is required to ensure the air quality impact is below the significant impact level and a full impact analysis will be required to increase this limit.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****2. Emission Limitations:**

a. Pursuant to Regulation 40 CFR 60.55b, there shall be no discharge of visible emissions from conveying systems (including transfer points) in excess of 5% of the observation period (i.e., 9 minutes per 3-hour period) as determined by EPA Reference Method 22.

b. Pursuant to 40 CFR 60.55b(b) and (c), the emission limit listed above does not cover visible emissions discharged inside buildings or enclosures; however the emissions limit does cover visible emissions discharged to the atmosphere from buildings or enclosures. The limit listed in section 2.b above does not apply during maintenance of the conveying system.

**3. Testing Requirements:**

Pursuant to Regulation 40 CFR 60.55b, the owner or operator shall conduct initial and annual performance tests for fugitive particulate emissions using EPA Reference Method 22 or an alternate reference test method approved by the Division, in accordance with General Condition G(d)(5). The minimum observation time shall be a series of three 1-hour observations. The observation period shall include times when the facility is transferring frit from the gasification unit to the storage area. The average duration of visible emissions per hour shall be calculated from the three 1-hour observations. The average shall be used to determine compliance with 40 CFR 60.55b.

**4. Specific Monitoring Requirements:**

a) The permittee shall monitor/record the hours of operation of the equipment specified in the description.

b) The permittee shall monitor/record the weight of vitrified frit handled on a weekly basis.

**5. Specific Recordkeeping Requirements:**

The permittee shall maintain records of weekly vitrified frit processed, the weight of materials handled, and weekly hours of operation. The record shall be maintained on site and made available for inspection by authorized personnel from the Division.

**6. Specific Reporting Requirements:**

See Section F.

**7. Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, the permittee shall comply with best available control technology with use of enclosures and good operating practices.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 06 (06) - Limestone Material Silo Loading**

#### **Description:**

Construction commenced: Expected Summer 2001

Rated capacity: 135 tons/day

Control equipment: filter

#### **Units**

Limestone transfer to silo (one hour/day, weekly average)

#### **Applicable Regulations:**

Regulation 401 KAR 59:010, New process operations, and

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

#### **1. Operating Limitations:**

Pursuant to Regulation 401 KAR 51:017, the "limestone transfer to silo" unit shall be operated no more than one (1) hour/day (weekly average). This limitation is required to ensure the air quality impact is below the significant impact level and a full impact analysis will be required to increase this limit.

#### **2. Emission Limitations:**

a) Pursuant to Regulation 401 KAR 51:017, and pursuant to Regulation 401 KAR 59:010, Section 3(2), particulate matter emissions into the open air shall not exceed 0.02 lb/hour. Compliance with the allowable particulate standard may be demonstrated by calculating particulate emissions using the following formula:

PM emissions (lbs/hour) from silo loading = (U.S. EPA approved or AP-42 emission factor with filter efficiency factored in: 0.001 lb/ton)(silo loading rate in tons/hr).

b) Pursuant to Regulation 401 KAR 59:010, Section 3(1)(a) visible emissions shall not equal or exceed twenty (20) percent opacity based on a six-minute average.

#### **3. Testing Requirements:**

None.

#### **4. Specific Monitoring Requirements:**

a) The permittee shall monitor/record the hours of operation of the units specified in the description.

b) The permittee shall monitor/record the weight of limestone handled on a weekly basis.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

c) The permittee shall perform a qualitative visual observation of the opacity of emissions from control equipment on a daily basis and maintain a log of the observations. If visible emissions from any control equipment are perceived or believed to exceed the applicable standard, the permittee shall determine the opacity of emissions by Reference Method 9 and initiate an inspection of the control equipment making any necessary repairs.

### **5. Specific Recordkeeping Requirements:**

a) The permittee shall maintain records of weekly limestone processed, the weight of materials handled, and weekly hours of operation. The record shall be maintained on site and made available for inspection by authorized personnel from the Division.

b) The permittee shall calculate and maintain records of such calculations to assure compliance with the hourly emission limitations for the limestone.

### **6. Specific Reporting Requirements:**

See Section F.

### **7. Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, the permittee shall comply with best available control technology with use of a high efficiency filter unit and good operating practices.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 07 (07) - Limestone Handling Operations**

#### **Description:**

Construction commenced: Expected Summer 2001

Rated capacity: 135 tons/day

Control equipment: Enclosures

#### **Units**

Transfer out of silo, (continuous)

Transfer to gasifier hopper (continuous)

#### **Applicable Regulations:**

Regulation 401 KAR 63:010, Fugitive emissions, and

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

#### **Applicable Requirements**

a) Pursuant to Regulation 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:

1. Application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;
  2. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling.
- b) Pursuant to Regulation 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

1. **Operating Limitations:**

None.

2. **Emission Limitations:**

None.

3. **Testing Requirements:**

None.

4. **Specific Monitoring Requirements:**

None.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS,  
AND OPERATING CONDITIONS (CONTINUED)**

**5. Specific Recordkeeping Requirements:**

None.

**6. Specific Reporting Requirements:**

See Section F.

**7. Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, particulate emissions shall be controlled by partial enclosures.



## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 08 (08) - Pet Coke Silo Loading**

#### **Description:**

Construction commenced: Expected Summer 2001

Rated capacity: 60 tons/startup, 12 startups per year (initial Global estimate)

Control equipment: Filter

Pet coke transfer to silo

#### **Applicable Regulations:**

Regulation 401 KAR 59:010, New process operations, and

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

#### **1. Operating Limitations:**

Pursuant to Regulation 401 KAR 51:017, The pet coke silo loading units shall only be operated associated with the 12 startups per year. This limitation is required to ensure the air quality impact is below the significant impact level and a full impact analysis will be required to increase this limit.

#### **2. Emission Limitations:**

a) Pursuant to Regulation 401 KAR 51:017, and pursuant to Regulation 401 KAR 59:010, Section 3(2), particulate matter emissions into the open air shall not exceed 0.48 lb/hour. Compliance with the allowable particulate standard may be demonstrated by calculating particulate emissions using the following formula:

PM emissions (lbs/hour) from silo loading = (U.S. EPA approved or AP-42 emission factor with filter efficiency factored in: 0.002 lb/ton)(silo loading rate in tons/hr).

b) Pursuant to Regulation 401 KAR 59:010, Section 3(1)(a) visible emissions shall not equal or exceed twenty (20) percent opacity based on a six-minute average.

#### **3. Testing Requirements:**

None.

#### **4. Specific Monitoring Requirements:**

a) The permittee shall monitor/record the hours of operation of the units specified in the description.

b) The permittee shall monitor/record the weight of pet coke handled on a weekly basis.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

c) The permittee shall perform a qualitative visual observation of the opacity of emissions from control equipment at least once during each material transfer event or operation and maintain a log of the observations. If visible emissions from any control equipment are perceived or believed to exceed the applicable standard, the permittee shall determine the opacity of emissions by Reference Method 9 and initiate an inspection of the control equipment making any necessary repairs.

### **5. Specific Recordkeeping Requirements:**

a) The permittee shall maintain records of monthly pet coke processed, the weight of materials handled, and monthly hours of operation. The record shall be maintained on site and made available for inspection by authorized personnel from the Division.

b) The permittee shall calculate and maintain records of such calculations to assure compliance with the hourly emission limitations for the pet coke.

### **6. Specific Reporting Requirements:**

See Section F.

### **7. Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, the permittee shall comply with best available control technology with use of a high efficiency filter unit and good operating practices.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 09 (09) - Pet Coke Material Handling**

#### **Description:**

Construction commenced: Expected Summer 2001

Rated capacity: 240 tons/day

Control equipment: Enclosures

#### **Units**

Transfer out of silo, (continuous)

Transfer to gasifier hopper (continuous)

#### **Applicable Regulations:**

Regulation 401 KAR 63:010, Fugitive emissions, and

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

#### **Applicable Requirements**

a) Pursuant to Regulation 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:

1. Application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;
2. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling.

b) Pursuant to Regulation 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

1. **Operating Limitations:**

None

2. **Emission Limitations:**

None.

3. **Testing Requirements:**

None.

4. **Specific Monitoring Requirements:**

None.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS,  
AND OPERATING CONDITIONS (CONTINUED)**

**5. Specific Recordkeeping Requirements:**

None.

**6. Specific Reporting Requirements:**

See Section F.

**7. Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, particulate emissions shall be controlled by partial enclosures.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 10 (-) - Sulfur Recovery Operations and Sulfur Loading & Storage Operations**

#### **Description:**

Construction commenced: Expected Summer 2001

Rated capacity: 3.1 Tons/hour

#### **Unit**

Sulfur recovery unit - 99.9 % recovery

#### **Applicable Regulations:**

Regulation 401 KAR 59:105, New process gas streams, and

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

#### **1. Operating Limitations:**

At all times during normal operation (non-emergency situations), the gas cleanup with specialty amine solvent scrubbing and Claus process sulfur recovery with closed loop tailgas recycle, shall be operated in accordance with design specifications and/or good engineering practices.

#### **2. Emission Limitations:**

Pursuant to Regulation 401 KAR 59:105, Section 3, for sources whose combined process gas stream emission rate totals less than two (2) tons per day of hydrogen sulfide (for example, KY Pioneer sulfur recovery process emissions potential emissions equal 0.108 tons/year, reference application log G364 Appendix A, page 5 of 13, 11/12/1999) the permittee shall either reduce such emissions by eighty-five (85) percent or control such emissions such that hydrogen sulfide in the gas stream emitted into the ambient air does not exceed ten (10) grains per 100 dscf (165 ppm by volume) at zero percent oxygen.

#### **3. Testing Requirements:**

Pursuant to Regulation 401 KAR 59:105, Section 6, an initial performance test to demonstrate compliance with the hydrogen sulfide emission limitation requirement in Subsection 2 shall be conducted according to Reference Method 11. The sample shall be drawn from a point near the centroid of the gas line. The minimum sampling time shall be ten (10) minutes and the minimum sample volume shall be 0.01 dscm (0.35 dscf) for each sample. The arithmetic average of two (2) samples shall constitute one (1) run. Samples shall be taken at approximately one (1) hour intervals.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **4. Specific Monitoring Requirements:**

- a) The permittee shall monitor/record the hours of operation of the units specified in the description.
- b) The permittee shall monitor/record the weight of sulfur produced on a weekly basis.
- c) The permittee shall monitor/record the amount of sulfur produced, and assure the calculated sulfur production rate, as determined from weekly data, does not exceed the maximum production rate of sulfur from which resulting hydrogen sulfide emission levels are shown to assure compliance as demonstrated during the performance test.

### **5. Specific Recordkeeping Requirements:**

- a) The permittee shall maintain records of weekly sulfur produced, the weight of sulfur handled, and weekly hours of operation. The record shall be maintained on site and made available for inspection by authorized personnel from the Division.
- b) The permittee shall calculate and maintain records of such calculations to assure compliance with the hydrogen sulfide emission limitation. The calculations shall be performed weekly with use of the weekly sulfur production rate, based on the weight of sulfur and hours of operation per week, emission factors as determined from the hydrogen sulfide performance test required as specified in Subsection 3, Testing Requirements.

### **6. Specific Reporting Requirements:**

See Section F.

### **7. Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, the permittee shall comply with best available control technology with use of a high efficiency filter unit and good operating practices.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 11 (10) - Cooling Tower**

#### **Description:**

Construction commenced: Expected Summer 2001

Rated capacity: 20,000 gallons/minute

Control equipment: high efficiency mist eliminators

#### **Applicable Regulations:**

Regulation 401 KAR 63:010, Fugitive emissions, and

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

#### **Applicable Requirements**

a) Pursuant to Regulation 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

b) Pursuant to Regulation 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

#### **1. Operating Limitations:**

None.

#### **2. Emission Limitations:**

a) Pursuant to Regulation 401 KAR 51:017, emissions of particulate matter shall not exceed 1.5 lb/hour. Compliance with the allowable particulate standard may be demonstrated by calculating particulate emissions using the following formula:

b) PM emissions (lbs/hour) from cooling tower = (U.S. EPA approved or AP-42 emission factor with filter efficiency factored in:  $1.25 \times 10^{-6}$  lb/gallon)(circulation rate in gallons/hr).

#### **3. Testing Requirements:**

None.

#### **4. Specific Monitoring Requirements:**

The permittee shall monitor the circulation rate on a daily basis.

#### **5. Specific Recordkeeping Requirements:**

a) The permittee shall keep records of the circulation rate on a daily basis.

b) The permittee shall calculate and maintain records of such calculations to assure compliance with the particulate matter emission limitation.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS,  
AND OPERATING CONDITIONS (CONTINUED)**

**6. Specific Reporting Requirements:**

See Section F.

**7. Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, particulate emissions shall be controlled by high efficiency mist eliminators.



## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emissions Unit: 12 (11) - Wastewater Treatment**

#### **Description:**

Construction commenced: Expected Summer 2001

Rated capacity: 100,000 gallons/day

#### **Applicable Regulations:**

Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating Limitations:**

None.

2. **Emission Limitations:**

None.

3. **Testing Requirements:**

None.

4. **Specific Monitoring Requirements:**

The permittee shall monitor amount of wastewater discharged on a daily basis.

5. **Specific Recordkeeping Requirements:**

a) The permittee shall maintain records of wastewater discharged on a daily basis.

b) The permittee shall maintain records of wastewater treatment design and engineering estimates of average free-phase VOC concentrations.

6. **Specific Reporting Requirements:**

See Section F.

7. **Specific Control Equipment Operating Conditions:**

Pursuant to Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, VOC emissions shall be controlled by enclosed piping and storage of wastewater streams with flows greater than 1 liter per minute (annual average) and VOC concentrations greater than 1% by weight (annual average).

**SECTION C - INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 50:035, Section 5(4). While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

	<u>Description</u>	<u>Generally Applicable Regulation</u>
1.	Emergency diesel electric generator	NA
2.	Fuel cell	NA

## **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS**

1. Nitrogen oxide, carbon monoxide, sulfur dioxide, particulate, volatile organic compounds, beryllium, cadmium, lead, mercury, hydrogen chloride, and dioxins/furans emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.
2. Compliance with annual emissions and processing limitations imposed pursuant to 401 KAR 50:035, Section 7(1)(a), and contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
3. Between 18 to 24 months after startup , the permittee shall submit to the Division for Air quality a NO<sub>x</sub> BACT determination as if it was a new source, using the data gathered on this facility, other similar facilities, and the equipment manufacturer's research. The Division will make a determination on BACT for NO<sub>x</sub> only, require control equipment based on the BACT analysis, and adjust the NO<sub>x</sub> emission limits accordingly.

## **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS**

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

**SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS**

1. When continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
  - a. Date, place as defined in this permit, and time of sampling or measurements.
  - b. Analyses performance dates;
  - c. Company or entity that performed analyses;
  - d. Analytical techniques or methods used;
  - e. Analyses results; and
  - f. Operating conditions during time of sampling or measurement;
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 50:035, Permits, Section 7(1)(d)2 and 401 KAR 50:035, Permits, Section 7(2)(c)]
3. In accordance with the requirements of 401 KAR 50:035, Permits, Section 7(2)(c) the permittee shall allow the Cabinet or authorized representatives to perform the following:
  - a. Enter upon the premises where a source is located or emissions-related activity is conducted, or where records are kept;
  - b. Have access to and copy, at reasonable times, any records required by the permit:
    - i. During normal office hours, and
    - ii. During periods of emergency when prompt access to records is essential to proper assessment by the Cabinet;
  - c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times shall include, but are not limited to the following:
    - i. During all hours of operation at the source,
    - ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
    - iii. During an emergency; and
  - d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements. Reasonable times shall include, but are not limited to the following:
    - i. During all hours of operation at the source,
    - ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
    - iii. During an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

**SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS  
(CONTINUED)**

5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the division's Frankfort Regional Office at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation.

The reports are due within 30 days after the end of each six-month reporting period that commences on the initial issuance date of this permit. The permittee may shift to semi-annual reporting on a calendar year basis upon approval of the regional office. If calendar year reporting is approved, the semi-annual reports are due January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to Section 6(1) of 401 KAR 50:035, Permits. All deviations from permit requirements shall be clearly identified in the reports.

6. a. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Division for Air Quality's Frankfort Regional Office concerning startups, shutdowns, or malfunctions as follows:
1. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  2. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.
- b. In accordance with the provisions of 401 KAR 50:035, Section 7(1)(e)2, the owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by general condition 6 a. above) to the Division for Air Quality's Frankfort Regional Office within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by general condition F.5.

**SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS  
(CONTINUED)**

7. Pursuant to 401 KAR 50:035, Permits, Section 7(2)(b), the permittee shall certify compliance with the terms and conditions contained in this permit, annually on the permit issuance anniversary date or by January 30th of each year if calendar year reporting is approved by the regional office, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Division for Air Quality's Frankfort Regional Office and the U.S. EPA in accordance with the following requirements:
- Identification of each term or condition of the permit that is the basis of the certification;
  - The compliance status regarding each term or condition of the permit;
  - Whether compliance was continuous or intermittent; and
  - The method used for determining the compliance status for the source, currently and over the reporting period, pursuant to 401 KAR 50:035, Section 7(1)(c),(d), and (e).
  - For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
  - The certification shall be postmarked by the thirtieth (30) day following the applicable permit issuance anniversary date, or by January 30th of each year if calendar year reporting is approved by the regional office. **Annual compliance certifications should be mailed to the following addresses:**

**Division for Air Quality  
Frankfort Regional Office  
643 Teton Trail, Suite B  
Frankfort, KY 40601-1758**

**U.S. EPA Region IV  
Air Enforcement Branch  
Atlanta Federal Center  
61 Forsyth St.  
Atlanta, GA 30303-8960**

**Division for Air Quality  
Central Files  
803 Schenkel Lane  
Frankfort, KY 40601**

8. In accordance with 401 KAR 50:035, Section 23, the permittee shall provide the division with all information necessary to determine its subject emissions within thirty (30) days of the date the KEIS emission report is mailed to the permittee.
9. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

**SECTION G - GENERAL CONDITIONS****(a) General Compliance Requirements**

1. The permittee shall comply with all conditions of this permit. A noncompliance shall be (a) violation(s) of 401 KAR 50:035, Permits, Section 7(3)(d) and Federal Statute 42 USC 7401 through 7671q and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition.
3. This permit may be revised, revoked, reopened and reissued, or terminated for cause. The permit will be reopened for cause and revised accordingly under the following circumstances:
  - a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 50:035, Section 12(2)(c);
  - b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
  - c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
  - d. If any additional applicable requirements of the Acid Rain Program become applicable to the source.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish to the Division, in writing, information that the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. [401 KAR 50:035, Permits, Section 7(2)(b)3e and 401 KAR 50:035, Permits, Section 7(3)(j)]
5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority.



**SECTION G - GENERAL CONDITIONS (CONTINUED)**

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [401 KAR 50:035, Permits, Section 7(3)(k)]
7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance. [401 KAR 50:035, Permits, Section 7(3)(e)]
8. Except as identified as state-origin requirements in this permit, all terms and conditions contained herein shall be enforceable by the United States Environmental Protection Agency and citizens of the United States.
9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6). [401 KAR 50:035, Permits, Section 7(3)(h)]
10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 50:035, Permits, Section 8(3)(b)]
11. This permit shall not convey property rights or exclusive privileges. [401 KAR 50:035, Permits, Section 7 (3)(g)]
12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.
13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry. [401 KAR 50:035, Permits, Section 7(2)(b)5]
14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders. [401 KAR 50:035, Permits, Section 8(3)(a)]
15. Permit Shield: Except as provided in 401 KAR 50:035, Permits, compliance by the affected facilities listed herein with the conditions of this permit shall be deemed to be compliance with all applicable requirements identified in this permit as of the date of issuance of this permit.
16. All previously issued construction and operating permits are hereby subsumed into this permit.

**SECTION G - GENERAL CONDITIONS (CONTINUED)****(b) Permit Expiration and Reapplication Requirements**

This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the division. [401 KAR 50:035, Permits, Section 12]

**(c) Permit Revisions**

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 50:035, Section 15.
2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority thirty (30) days in advance of the transfer.

**(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements**

1. Construction of process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
2. Within thirty (30) days following commencement of construction, and within fifteen (15) days following start-up, and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Division for Air Quality's Frankfort Regional Office in writing, with a copy to the division's Frankfort Central Office, notification of the following:
  - a. The date when construction commenced.
  - b. The date of start-up of the affected facilities listed in this permit.
  - c. The date when the maximum production rate specified in the permit application was achieved.

**SECTION G - GENERAL CONDITIONS (CONTINUED)**

3. Pursuant to 401 KAR 50:035, Permits, Section 13(1), unless construction is commenced on or before 18 months after the date of issue of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or if construction is not completed within eighteen (18) months of the scheduled completion date, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Extensions of the time periods specified herein may be granted by the division upon a satisfactory request showing that an extension is justified.
4. Operation of the affected facilities for which construction is authorized by this permit shall not commence until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055, except as provided in Section I of this permit.
5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Conditions G(d)6 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.
6. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the division shall be notified of the actual test date at least ten (10) days prior to the test.

(e) Acid Rain Program Requirements

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. An emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:

**SECTION G - GENERAL CONDITIONS (CONTINUED)**

- a. An emergency occurred and the permittee can identify the cause of the emergency;
    - b. The permitted facility was at the time being properly operated;
    - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
    - d. The permittee notified the division as promptly as possible and submitted written notice of the emergency to the division within two working days after the time when emission limitations were exceeded due to the emergency. The notice shall meet the requirements of 401 KAR 50:035, Permits, Section 7(1)(e)2, and include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken. This requirement does not relieve the source of any other local, state or federal notification requirements.
  2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement.
  3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 50:035, Permits, Section 9(3)]
- (g) Risk Management Provisions
1. The permittee shall comply with all applicable requirements of 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:  
**RMP Reporting Center**  
**P.O. Box 3346**  
**Merrifield, VA, 22116-3346**
  2. If requested, submit additional relevant information to the division or the U.S. EPA.
- (h) Ozone depleting substances
1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
    - a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
    - b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
    - c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
    - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.

**SECTION G - GENERAL CONDITIONS (CONTINUED)**

- e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

**SECTION H – ALTERNATE OPERATING SCENARIOS**

Not Applicable

**SECTION I – COMPLIANCE SCHEDULE**

Not Applicable

**SECTION J – ACID RAIN**  
**Commonwealth of Kentucky**  
**Natural Resources and Environmental Protection Cabinet**  
**Department for Environmental Protection**  
**Division for Air Quality**  
**803 Schenkel Lane**  
**Frankfort, Kentucky 40601**  
**(502) 573-3382**

**PHASE II ACID RAIN PERMIT**

<b>Plant Name:</b>	Kentucky Pioneer Energy	
<b>Plant Location:</b>	12145 Irvine Road, Trapp, Kentucky 40391	
<b>Owner:</b>	Kentucky Pioneer Energy LLC	
<b>Mailing Address:</b>	312 Walnut Street, Suite 2000, Cincinnati, Ohio 45202	
<b>Region:</b>	Bluegrass	<b>County:</b> Clark

**ACID RAIN PERMIT CONTENTS**

- 1) Statement of Basis
- 2) SO<sub>2</sub> allowances allocated under this permit and NO<sub>x</sub> requirements for each affected unit.
- 3) Comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.
- 4) The permit application submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the Phase II Application.
- 5) Summary of Actions

**1. Statement of Basis:**

**Statutory and Regulatory Authorities:** In accordance with KRS 224.10-100 and Titles IV and V of the Clean Air Act, the Kentucky Natural Resources and Environmental Protection Cabinet, Division for Air Quality issues this permit pursuant to Regulations 401 KAR 50:035, Permits, 401 KAR 50:072, Acid Rain Permit, and Federal Regulation 40 CFR Part 76.

**PERMIT (Conditions)**

<b>Plant Name:</b> Kentucky Pioneer Energy
<b>Affected Unit:</b> 01 – GT1

**2. SO<sub>2</sub> Allowance Allocations and NO<sub>x</sub> Requirements for the affected unit:**

SO <sub>2</sub> Allowances	Year				
	2001	2002	2003	2004	2005
<b>Tables 2, 3 or 4 of 40 CFR Part 73</b>	0*	0*	0*	0*	0*

<b>NO<sub>x</sub> Requirements</b>	
<b>NO<sub>x</sub> Limits</b>	N/A**

\* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO<sub>2</sub> allowance allocations identified in this permit (See 40 CFR 72.84).

\*\* This unit currently does not have applicable NO<sub>x</sub> limits set by 40 CFR, part 76.



**PERMIT (Conditions)**

<b>Plant Name:</b> Kentucky Pioneer Energy
<b>Affected Unit:</b> 02 – GT2

**SO<sub>2</sub> Allowance Allocations and NO<sub>x</sub> Requirements for the affected unit:**

SO <sub>2</sub> Allowances	Year				
	2001	2002	2003	2004	2005
<b>Tables 2, 3 or 4 of 40 CFR Part 73</b>	0*	0*	0*	0*	0*

<b>NO<sub>x</sub> Requirements</b>	
<b>NO<sub>x</sub> Limits</b>	N/A**

\* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO<sub>2</sub> allowance allocations identified in this permit (See 40 CFR 72.84).

\*\* This unit currently does not have applicable NO<sub>x</sub> limits set by 40 CFR, part 76.

## **PERMIT (Conditions)**

### **3. Comments, Notes, and Justifications:**

The two (2) Combined Cycle Combustion Turbines, units 01 and 02 will be constructed after the SO<sub>2</sub> allocation date; therefore these units will have no SO<sub>2</sub> allowances allocated by U.S. EPA and must obtain SO<sub>2</sub> allowances through other means.

The two (2) Combined Cycle Combustion Turbines, units 01 and 02 do not have applicable NO<sub>x</sub> limits set by 40 CFR part 76.

### **4. Permit Application:**      Attached

The Phase II Permit Application is a part of this permit and the source must comply with the standard requirements and special provisions set forth in the Phase II Application.

### **5. Summary of Actions:**

#### **Past Action:**

1. Draft Phase II Permit (# A-00-007) was proposed for public comment.

#### **Present Action:**

1. Acid Rain Phase II permit # A-00-007 was included (as Section J) in Title V permit #V-00-049 and issued as a proposed permit on June 7, 2001.